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Book reviews and notices

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Abstract—Books reviewed include: *Ascomycota*—Catalogue of discomycetes referred to the genera *Helotium* Pers. and *Hymenoscyphus* Gray (Lizoň & Kučera 2014); *Basidiomycota*—FunKey: an interactive guide to the macrofungi of Australia. Key to agarics (May & al. 2014); Checklist—Kommentierter Katalog der Flechtenbewohnenden Pilze Bayerns (von Brackel 2014).

Two different types of checklists are reviewed in this instalment of the book reviews. The first, which is of nomenclatorial interest, deals with the genera *Helotium* and *Hymenoscyphus;* the second checklist lists the fungi living on lichens in Bavaria. The third review looks at an interactive key for the genera of agarics in Australia. I foresee more of the latter type of publication in the future!

Ascomycota

Catalogue of Discomycetes referred to the genera *Helotium* Pers. and *Hymenoscyphus* Gray. By P. Lizoň & V. Kučera. 2014. Institute of Botany, Slovak Academy of Sciences, Dúbravská cesta 9, SK-84523 Bratislava, Slovakia. <www.ibot.sav.sk> ISBN 978-80-971837-4-5. 144 pp. Price not known.

Since 1801 (or at least from 1849 onwards), more or less stalked, non-hairy and non-gelatinous inoperculate discomycetes were generally classified in the

[*] Book reviews or books for consideration for coverage in this column should be sent to the address above OR to the *Editor-in-Chief* at editor@mycotaxon.com or 6720 NW Skyline, Portland OR 97229 USA.

genus *Helotium* Pers., essentially paving the way for the genus to become an enormous heterogeneous collection of taxa. When in 1962 R.W.G. Dennis argued that this genus should be split up into a (small) genus *Helotium* and a (large) genus *Hymenoscyphus* Gray, M.A. Donk demonstrated that *Helotium* Pers. was a later homonym of the basidiomycete generic name *Helotium* Tode, thereby soon ending the currency of the discomycete genus *Helotium*. Since then, the genus *Hymenoscyphus* has increased considerably, by both new combinations and newly described taxa. It is beyond doubt that mycologists working on this group cannot avoid taxa once classified in *Helotium* and/or *Hymenoscyphus,* but they must make their way without world monographs of these species-rich genera.

Therefore Lizoň & Kučera have filled a gap by making a catalogue (checklist) of no less than 1183 specific and infraspecific epithets known to have at one time been attributed to *Helotium* and/or *Hymenoscyphus*. This number includes all validly published and a few unpublished or invalidly published names used in literature. Each entry comprises the *Helotium* and/or *Hymenoscyphus* name, the authority, the basionym, data about type substrate, country and specimen(s), the current name according to the authors or other authorities, and important taxonomic and/or nomenclatural remarks (e.g., about nomina nova or superfluous names). One entry does not necessarily present the complete synonymy of the taxon concerned. Where there is insufficient taxonomic information available or where there are different taxonomical opinions, a bold-faced current name is omitted. A short introductory chapter on the taxonomy and nomenclature of both genera and their common order (*Helotiales*) and family (*Helotiaceae*) precedes the actual catalogue. The book ends with an index of additional epithets mentioned within the entries.

It is evident that this publication has brought together a huge amount of relevant nomenclatural and taxonomical information about the taxa within the genera concerned. It also makes clear which taxa are, as yet, insufficiently known well enough for accurate classification.

Some critical remarks have certainly to be made here. In addition to many mistakes in spelling, typography (boldfaced instead of regular font), and grammar, the catalogue contains numerous inconsistencies. Abbreviations of author names, books, and periodicals are said to follow 'generally' (why not always?) the well-known standards, but the number of exceptions is fairly large: e.g., always 'Thind' instead of 'K.S. Thind' and sometimes 'Buchwald' for 'N.F. Buchw.', 'W. Phill.' for 'W. Phillips', 'Ell.' for 'Ellis', 'Sharma' or 'P.M. Sharma' for 'M.P. Sharma', 'B. Declercq' for 'Declerq', 'J. Hengstm.' for 'Hengstm.', 'P. Karsten' for 'P. Karst.', 'Monogr. Discomyc. Boh.' (Velenovský) for 'Monogr. Discomyc.

Bohem.', and 'Bidr. Känned. Finl. Nat. Folk' for 'Bidrag Kännedom Finlands Natur Folk' etc.

The way in which the authors use the equality sign (=), indicating heterotypic synonymy, and the triple bar (≡), indicating homotypic synonymy, is disputable. Combinations of *Helotium* or *Hymenoscyphus* and the epithet of an entry are not preceded by such a triple bar. If the basionym concerned or the current name, if homotypic, does not belong to one of these genera, it is preceded by a triple bar. However, sometimes the basionym is wrongly preceded by an equality sign (e.g., *Allophyllaria filicum*) or by no sign at all (e.g., *Phialea bicolor*). A nomen novum or recombination that is homotypic with the replaced name should be preceded by a triple bar, at any rate not by an equality sign as mostly is done in this book (e.g., under *destructor*, *robergei*, and *vernale*). It would have been more logical to precede not only the basionym but all its recombinations and nomina nova by a triple bar, as is usually done.

As far as possible, in each entry the current name is indicated and printed in bold (see above). Unfortunately this has been done rather inconsistently. For example, the entries *imberbe* and *pileatum* (P. Karst.) each contain two 'current' names. Under *cupularum, Hym. imberbis* is mentioned as the current name, but under *obliquum* its homotypic synonym, *Phaeohelotium imberbe*, is flagged as current. In several entries a current name is indicated which, according to the entry of the epithet concerned, is NOT the current name. For example, under *hymenulus* and *ostruthii, Hym. herbarum* is mentioned as current name, while under *herbarum* it is stated that *Calycina herbarum* is the current name. Similarly this applies to *Hym. epiphyllus* in the entries *gyalectoides* and *lunatum* resp. *epiphyllum*. Under *phiala,* an invalidly published name is even marked as the 'current' name.

The authors appear to have paid attention to the inclusion of orthographic errors that, as usual, are placed between single quotation marks and brackets behind the corrected form. However, many orthographic errors remain, even in the labels of the entries, e.g., *aspidiicolum*, *caulicolum,* and *pinicolum*.

The conclusion may be that this catalogue is certainly an asset for all mycologists who are engaged with helotioid discomycetes. Unfortunately the many inaccuracies, which could have been prevented by a more thorough final editing, detract from the quality. Therefore this catalogue is not the dependable standard work for both genera that it might have been.

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Basidiomycota

FunKey: an Interactive Guide to the Macrofungi of Australia. Key to Agarics. version 1. By T. W. May, K. Thiele, C. W. Dunk, S. H. Lewis. 2014. Identic, Brisbane and ABRS, Canberra. <http://shop.lucidcentral.org/>. ISBN 978-0-642-56877-9. 1200+ images (numerous in colour) for 159 taxa and 383 character states. Price: $50.73 (USB 2.0 Key).

> FunKey is also available as an "app" for mobile devices using Apple or Android systems. The app provides the interactive key and fact sheets for genera and characters. However, the app does not include the extensive introductory material on genera and characters or the glossary that is present on the USB version. In the app, the best function is available, but not other Lucid key functions such as subsets or ranked sort. Purchase direct from either the iTunes store:
> https://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=958085767&mt=8
> or Google Play:
> https://play.google.com/store/apps/details?id=com.lucidcentral.mobile.funkey&hl=en

According to its introduction, "FunKey: Key to Agarics" is an interactive key and information system for the agaric genera occurring in Australia.

FunKey is available on a USB key or, in a slimmed down version, as an app for mobile devices. I reviewed the USB version. The system requirements for this program are an Internet browser with installed Java plug-ins. Once installed, it feels like working on-line, even though all data are present on the USB key.

The main part is formed by the interactive keys where you can start with whatever character you wish; as you select a character from a list of characters and character states, groups of taxa or genera are left in the in-group while others move to the discarded group. For instance, if you choose white spores, all species with coloured spores are immediately eliminated from the list of possible candidates. The final selections can be further examined, as the fact-sheets for every species/species group provide extensive information.

The keys work well; I tested them with *Macrolepiota clelandii* and an *Agaricus*. However, users should be well aware that in many cases the keys do not lead you to a species but to a genus, species group, or section of a genus. A second caveat is that for many Australian species, names are not yet available, so that can be frustrating as well.

What makes this so valuable is all the background information. There is a fact sheet for each genus or group with notes on characteristics, distribution in Australia, photos, a list of references; there is also extensive discussion and argument for generic placements, a glossary for all the terms used in the keys and descriptions, and a compiled list with all references.

These resources make this a very useful work for people in other countries. FunKey is also an example how to make data on fungi more easily accessible than is possible in traditional publishing formats such as dichotomous keys or written descriptions without keys. Of course, as version 1 is only the beginning, I am looking forward to expanded updates with keys to all the named species.

Checklist

Kommentierter Katalog der Flechtenbewohnenden Pilze Bayerns. By W. von Brackel, 2014. Bibliotheca Lichenologica Volume 109. J. Cramer, Johannesstr. 3A, 70176 Stuttgart, Germany, mail@schweizerbart.de, <www.borntraeger-cramer.de> ISBN 1436-1698. 476 pages, 13 illustrations. Price 119.00 €

Since 2004, von Brackel has focused on the lichenicolous fungi of Bavaria, of which he has documented and identified 1900 collections. The present work is the result of that very labour intensive research, conducted mostly in the author's evenings and weekends.

In all, von Brackel has identified (and here reports on) 403 species in 141 genera, including 372 obligate lichenicolous species and 31 others that are partly lichenized, facultatively lichenicolous, or have a taxonomy and ecology that are not well known. Five species new for science are introduced, and one new combination is proposed.

The book starts with a short introduction outlining the history of the discovery and cataloguing of the lichenicolous fungi in Bavaria—a history that goes back to the early 1800s. The author emphasizes that wherever there are lichens, there are fungi growing on them. However, it is important to remember that the ecological requirements of host and fungal symbiont are not always the same, and that their sensitivity to air pollution might differ.

The methods section explains how the data were collected in the field, where the collections are conserved, and how the book is organized.

The most important part follows: an alphabetical enumeration of genera and species that is over 400 pages long. For each genus a short introduction on taxonomic position, morphological characters, and ecology is given. The species are treated more in depth: name, synonyms, hosts, literature, comments, distribution (based on literature), distribution in Germany, finds in Bavaria (literature), and the author's own observations and collections are enumerated.

Acknowledgements followed by a list of references (almost 60 pages long) complete this work.

The 'catalogue' is a fascinating and important contribution to our knowledge of an often-neglected group of fungi. With this overview for Bavaria, comparisons with the checklist of lichenicolous fungi in Great Britain and Ireland (Hawksworth 2003) can be made, leading to better insight in distribution patterns and ecology.

I am not a specialist in this group, so I cannot comment on the nomenclature, and nomenclatorial issues always arise while compiling a book like this. While browsing through its pages, however, I noticed only one typographical error.

The author can be congratulated on such an important and thorough work. I hope that this printed book will also be available in an electronic version, which would make it so much easier to update and to consult than the hard-copy edition.

Hawksworth DL, 2003. The lichenicolous fungi of Great Britain and Ireland: an overview and annotated checklist. The Lichenologist 35: 191–232.

Book Announcements

Hypocrealean lineages of industrial and phytopathological importance. By L. Lombard, J.Z. Groenewald & P.W. Crous (Eds). 2015. Studies in Mycology 80. <www.cbs.knaw.nl>. ISSN 0166-0616. 245 pp., full colour. **Price:** € 70.00(free download).

Philatelic Mycology: Families of fungi. By W.F.O. Marasas, H.M. Marasas, M.J. Wingfield & P.W. Crous. 2014. CBS Biodiversity Series 14. <www.cbs.knaw.nl>. ISBN 978-90-70351-99-1. 107 pp., full colour. Price: € 40.00.